



# SoCrates – The Cyclone® V SoC Starter Kit

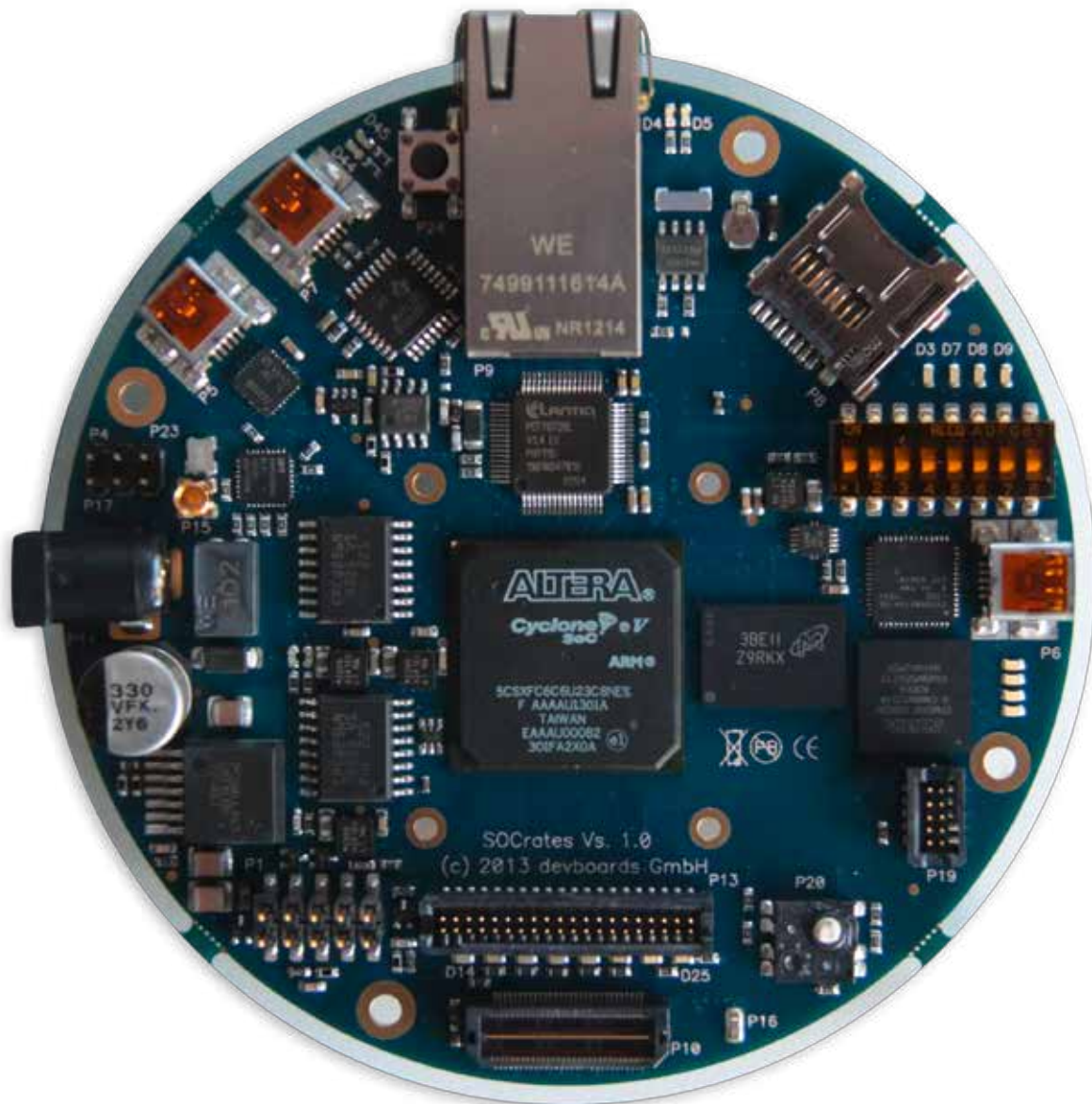
 RocketBoards.org

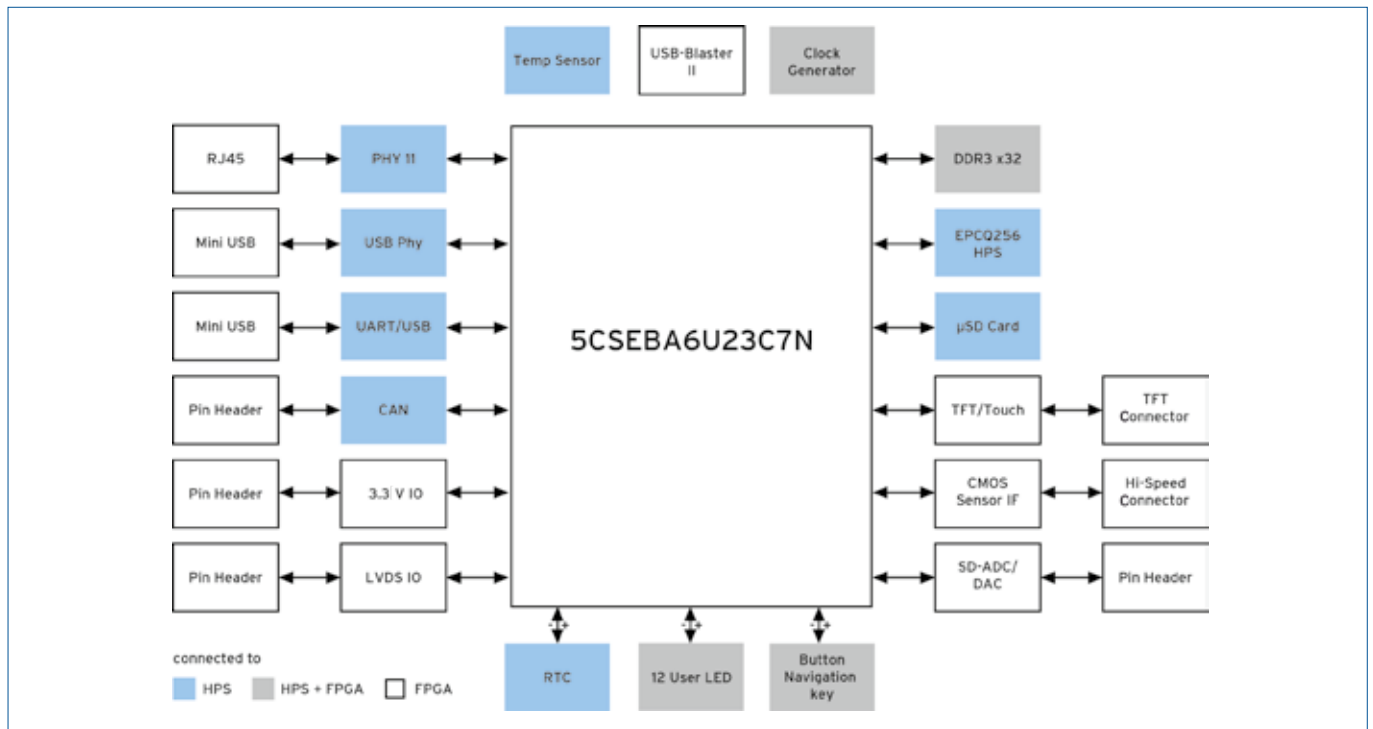


# SoCrates - The Cyclone® V SoC Starter Kit

SoCrates is a Starter Kit based on the new Altera SoC. The SoC integrates a dual-core ARM Cyclone® V FPGA with a dual-Cortex™ A9 Hard Processor Sub System (HPS). The HPS provides the processor core and several peripherals. SoCrates provides a subset of the peripherals like Ethernet, USB, SPI, I²C, UART, µSDCard and GPIO. A 32 bit DDR3 Memory is used together with a QSPI Flash as a BootOption, together with

the SD Card interface. The FPGA can be configured using a second QSPI Flash. The FPGA IO Pins are connected to several connectors, providing 3.3 V IO and LVDS IO Standard. A special LVDS connector is available to connect the EBV Observer CMOS Sensor Board to SoCrates. On the Bottom of the board, a TFT-display with an LVDS-interface can be connected.





#### Ref. Designs:

- Linux BSP / Golden Top
- mle  $\Sigma$  Reference Design
- TFT Ref design with Linux Support Tbd

#### Features:

- 5CSEBA6U23C7N
  - 110 K LEs
  - 112 DSP Blocks
  - 5.4 Mbit RAM
  - HPS
- EPCQ256 Configuration Device
- EPCQ256
- 128 Mx32 DDR3 Memory
- $\mu$ SD Card Slot
- Real-Time Clock
- Temperature Sensor

- PHY11G 1 Gbit PHY, GMII
- USB 2.0 Transceiver
- UART / USB Converter
- 1 CAN Transceiver
- GPIOs 3.3 V
- LVDS Interface
- LVDS TFT interface
- 12 User LEDs
- Navigation Key
- Embedded USB-Blaster II
- On Board 1.1 V / 1.35 V / 1.8 V / 2.5 V / 3.3 V Power Supply

Find more Informations at: [www.ebv.com/socrates](http://www.ebv.com/socrates)

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